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PREPARED BY AND FOR THE EMPLOYEES OF WALT DISNEY WORLD

JULY 22, 1977



The energy crunch is still on. It began with the Arab Oil Embargo of early 1974 when, for the first time, our seemingly inexhaustible and inexpensive supplies of energy became very exhaustible and very expensive. Valves were cranked back at the wellheads and natural gas reserves were substituted for the crude oil, consuming them at an accelerated rate.

We all knew the wells would someday run dry, but few listened to warning cries of environmentalists...until they had to wait in line for 60¢ a gallon gasoline. Today, the vocal environmentalists include President Jimmy Carter appearing on national television asking the nation to conserve until we develop new sources of energy to replace our very finite ones.

Disneyland and Walt Disney World designers had been listening to the warnings and much forethought was put into our two entertainment complexes to maximize our use of energy, to get the most for the least. And as we have grown from opening day, an even greater emphasis has been placed on energy conservation.

Our initial reaction to the Oil Embargo was to form a WIN Committee in 1974. Their efforts were directed toward reducing show lighting, office lighting and installing special time clocks throughout the Magic Kingdom to turn lights and air conditioning systems off when not in use.

These efforts certainly helped save energy, but caused an additional work load on many areas, for the time clocks had to be readjusted when Theme Park hours changed and during special events

like Saturday Night at the World. And, it naturally resulted in bad show for our guests and an inconvenience for our cast members when a time clock was inadvertently adjusted improperly.

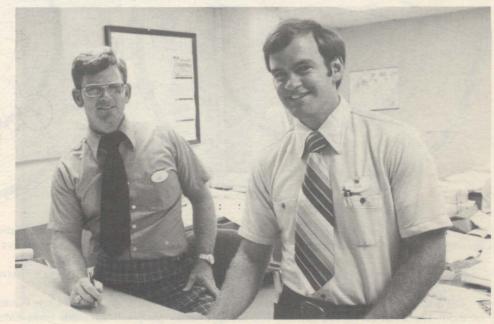
A new system of saving energy was needed, in fact, many new systems all across our property were needed as we became committed to a vigorous energy conservation program. The WIN Committee was dissolved and replaced by our Energy Management Committee, chaired by Bill Persons of Industrial Engineering Department, with representatives of Facilities Engineering, Facilities Maintenance, Reedy Creek Utilities Company, Scientific Programming De-

partment, Resort Maintenance, Lake Buena Vista Communities, and an outside consultant, **Dr. Bob Doering**, P.E. of the Engineering College at Florida Technological University.

#### TIME CLOCKS TO COMPUTERS...

The committee's first action was to evaluate the idea of a centralized computer control system to replace time clocks. "We established a prototype system last summer to cycle on and off several large air conditioning systems in the Park," Bill explained to us. The prototype test was a tremendous success and full-scale implementation was approved in January.

Rob Mitchell of Industrial Engineering



Bill Persons (I) and Rob Mitchell (r) of Industrial Engineering spend much of their time investigating and designing energy saving systems for Walt Disney World.

was assigned the task of overall coordination and implementation of the Theme Park Energy Management System (EMS), working closely with Bob Redgate whose years of diversified experience with DACS, Engineering, RCUC and Computers made the hardware system design effort a snap. The task of software design and programming went to Bob Martin of Scientific Programming.

We visited with the two Bobs and their EMS unit this week for a look at what it's doing to conserve energy at Walt Disney World.

"The computer is currently controlling 91 air conditioning points in the Magic Kingdom," Bob Martin explained. "Through programming EMS, it turns the air handlers on when they are needed and off when there is no need for them."

"And, we are outfitting the North Service Area now. The units there should be on line in a month or so, adding another 35 points to EMS," Bob Redgate added.

EMS is really paying its way, according to Bill. Pulling out charts which graphically demonstrate "Before and After" energy consumption and costs, we found that EMS is saving energy for us to the tune of \$1 million a year!

Comparing Walt Disney World's energy consumption with the energy you and I use in our homes and apartments, one big air conditioner in the tunnel uses as much energy each day as an average home uses in four months. But with EMS operating, we are now saving the equivalent of one month's electricity per night for each of these large units.

A typical cycle for a controlled air handler is **on** for 25-minutes and **off** for five-minutes every half-hour during operating hours in our attractions, and 15-minutes **off** and **on** during nonoperating hours. Theme Park hours and other factors are programmed right into the system, certainly better than the old time clock method.

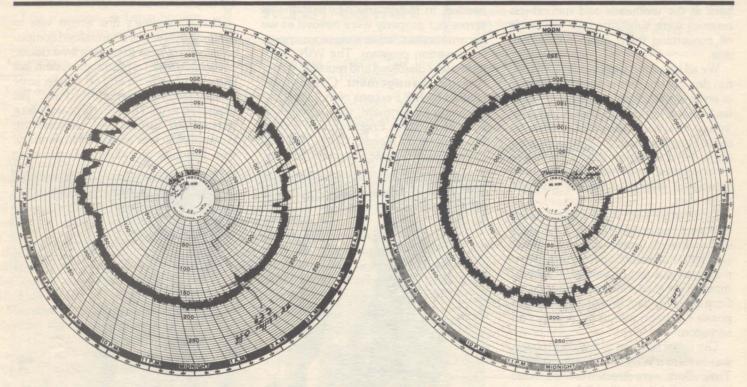
Bill pointed out that air conditioning is still run during the shortened schedule (nonoperating hours) for the comfort of custodial and maintenance crews working there. Areas that are unmanned during nonoperating hours are shut down for extended periods of time for an even greater savings.

Using layman's language, Bill said that EMS is just a switch with a memory. It

turns off air conditioning motors at a predetermined time. It even checks on itself; when the air ceases to flow, a special monitor tells the computer it's off. When EMS turns it back on later, if the monitor fails to agree with the computer brain . . . meaning that a "physical" check of the air flow doesn't match an "electronic" command . . . then an alarm sounds and EMS prints a message telling DACS personnel there is a problem somewhere.



Bob Martin programmed the software elements of the EMS, located in the heart of DACS Central under Fantasyland.



These two circle graphs represent the volume of cold water pumped from a chiller station at the Central Energy Plant in the North Service Area to the Magic Kingdom for use in the air conditioners. Enormous air handlers in the tunnel use the cold water to cool down air, which is then pumped into the attractions, shops and food locations.

Each graph spans a 24-hour period, measuring the chilled water in BTUs (British Thermal Units), a measuring standard used in cold liquids.

The graph on the **left** is **before EMS** became operational. Although there is some fluctuation in BTUs used, it shows an average of about 175 BTUs during the day and 160 at night. The **right** graph was made **while EMS** was operating. It shows that we averaged about 165 BTUs from 7:30 am to 2 am, then dropped off to 55 BTUs while the Park was closed.

This reduction alone will account for about \$1 million in energy savings per year.

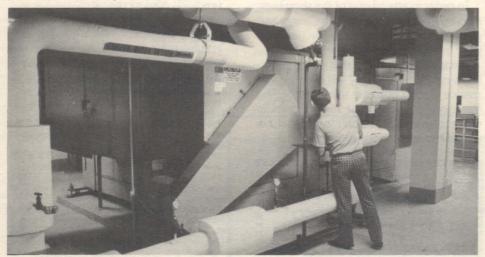
#### OTHER METHODS USED ...

EMS was just the beginning for our Energy Management Committee. With a track record of saving some \$1 million a year on air conditioning costs alone, they have set about putting the rest of Walt Disney World under their scrutiny. Through the innovative use of directed air currents, hot water production from waste heat, and similar undertakings, huge additional amounts of energy are being conserved with corresponding dollars being saved.

Next week, EYES & EARS will focus on these other energy management projects at Walt Disney World.



Bob Redgate designed and built the hardware ... or internal electrical parts ... of the EMS console unit.



Bill Persons reading a flow gauge attached to an air handler in the tunnels. Many of these huge machines take chilled water from the Central Energy Plant and convert it to cool air for the buildings above. By carefully cycling these air handlers on and off, EMS is saving us \$1 million.

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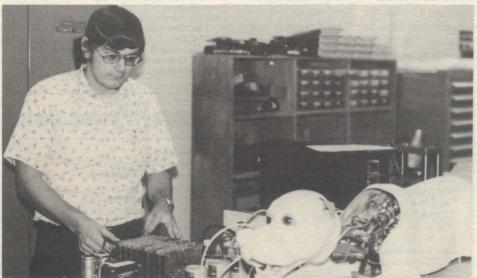
#### NEW PORTABLE COMPUTER TESTED

James Bond managed to carry many interesting things in his suitcase, but the one thing he never did manage to fit in was a computer. That has been left to our engineers at MAPO to build.

MAPO's new Micro Animation Control System (MACS), designed primarily

by **Steve McIntyre**, may soon make it possible to program and operate by portable computer small Audio-Animatronic figures . . . from a "suit-case."

At both Disneyland and Walt Disney World, there are many AA figures lo-



cated too far from DAC Central to operate off their huge computer systems, so they are currently run by a drum timer or cam machine. The drum is something like a music box cylinder and provides digital function only, whereas MACS would provide analog function as well.

Digital function provides one shot of power per command, something like an on/off light switch. Analog function, in comparison, acts something like a light "dimmer" switch, providing gradations of movement. MACS would allow the AA figures a larger number of movements, all much smoother, with fewer mechanical parts to wear out in the control system itself.

It's actually two units used together. The portable "suitcase" programmer would be carried out to the animation. A small playback unit would be attached permanently to the animation and the programmer hooked in. Then you just feed in your commands.

The current MACS is limited to eight analog commands, which is not sufficient for the larger AA figures, but is certainly an improvement for small animation in remote locations.

A prototype MACS is currently working in the lab at MAPO.

# TRIP TO DARK CONTINENT

Have you seen the commercials for the Dark Continent at Busch Gardens, Tampa yet? They look exciting . . . twisting and shouting in the merciless monstrous Mamba as you ride the 1200 foot Python roller coaster, taking you in a complete loop. Or you can board a monorail safari through the Serengeti Plain, Nairobi and Stanleyville . . . where just about anything can happen!

If ths sounds like fun to you, then sign on for the Cast Activties Safari to Busch Gardens on Thursday, August 11. A chartered bus will depart from Howard Johnson's Motor Lodge parking lot at Florida Center (Kirkman Road) at 8 am, for a day's adventure in the Dark Continent. And since the real jungle animals come out at night, this safari will have you back by 6 pm. The cost of the Safari, which includes admission to Busch Gardens, all attractions, and round-trip transportation, is \$12.50 per person.

This trip is open to cast members and their families, so make your way to Cast Activities and sign up for the Dark Continent adventure. The cost of the trip is due upon signing up and is non-refundable.

The deadline for sign ups is 5 pm on Tuesday, August 9. Call Pat in Cast Activities, extension 4254, for more details.



To The Cast:

Thank you for the lovely flowers.

Carmella Rossi

To The Cast:

Thanks to all the cast members for the lovely flowers, cards and thoughts during my recent hospitalization.

Lorna Biddle Merchandise Division

To The Cast:

The family of Jean O'Rourke acknowledges with appreciation the kind expressions of sympathy received during the recent loss of our loved one.

To The Cast:

I would like to thank the cast and my friends at Village Gifts in the Polynesian Village for the flowers and cards I received during my recent stay in the hospital. I'm doing fine now.

Yong Licht Village Gifts

To The Cast:

I cannot find words to thank you for all your flowers, cards and calls during Fred's recent illness and death. His greatest pleasure was being part of Walt Disney World. May God bless each and every one of you.

The Fred Schafer Family

To All The People At Walt Disney World:

I wanted to write and let you know how very much we enjoyed our stay in your fantastic world! It was our first visit, but hopefully not the last, we are already looking forward to our return.

Everyone we came in contact with was so very nice. I do think I have never before met so many courteous and genuinely nice people.

I'd like to compliment your entire staff for making Walt Disney World surely one

of the nicest places of its kind anywhere.
Sincerelv.

Elaine Rowland East Patchogue, New York Hi Evervone!

Where is the year going? I can't believe this is the middle of July! Would you believe that already plans are being made for the selection of my successor?! In a couple of weeks you will be hearing more about the Ambassador selection process, but in the mean time I thought you might like to know what your Ambassador has been doing.

In my last letter to all of you, I explained what activities are included in a target market tour. During April and May, I was involved in another six-city tour which included Hartford, Providence, Pittsburgh, Cleveland, St. Louis, and Atlanta. Mickey and his friends were welcomed everywhere our travels took us. It is a real joy to share the Disney Spirit with so many people through schools and hospitals,

and stage productions as well.

The beginning of May also brought the opening dedication of the "Empress Lilly". I had the priviledge of meeting Mrs. Lillian Disney Truyens at the event, and I think she is as proud of the beautiful new riverboat as we are! The same day I attended a ribbon-cutting ceremony with our official Walt Disney World airline, Eastern, for the inaugural direct flight from Orlando to New Orleans. The following week I welcomed a group of executives from Japan who represent Monsanto. It is always a pleasure to work with our participating companies. We all know how very much they have added to our total show at Walt Disney World, and we are proud to be associated with each of them. On May 26th I accepted a cake presented to the Entertainment Division, by the Everett J. H. Band of Panama City. This has become an annual event, and is their way of thanking us for allowing them to participate in our parade. We too appreciate their involvement, as each band gives our quests an added enjoyment.

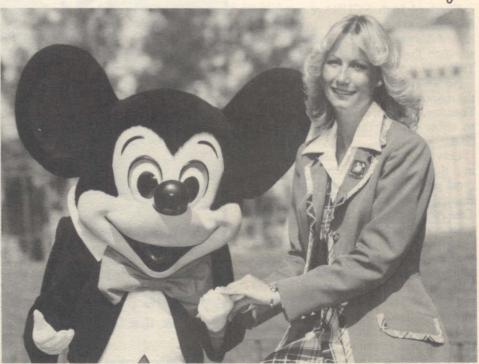
In June I met several very interesting people. I spent an afternoon with Mrs. Ruth Carter Stapleton, President Carter's sister,

who was most charming and genuinely warm to everyone she met. I also greeted a group of people from Australia and I think I asked more questions than they did! I am very curious about that corner of the world, and would love to visit some day!

Senator George McGovern and his grandchildren, the Commandant of the Marine Corps, and the Secretary of the Navy also visited Walt Disney World last month and it was a pleasure to meet all of them. On June 11th, we invited our former Ambassadors to spend the day with us and premiere the new Main Street Electrical Parade. I hope all of vou have been able to see it too. It is truly spectacular! I have been giving film presentations at events for local groups and participants, including receptions for DIJ Fun Day, the Sixth Naval District, and a General Electric Executive Breakfast. People everywhere are genuinely interested in what we are doing at Walt Disney World. The last three weeks in June. I traveled throughout the southeastern part of the U.S. to promote the Electrical Parade. We visited 11 cities in the short period of 12 days!! Also Sun Bank and Auto-Train joined our family of participants this June, and I am certain that each will be an added convenience, and pleasure for all of

That brings us to July. Presently, we are visiting other cities around Florida and also working on filming interesting areas throughout Walt Disney World to share with people everywhere. This year is slipping by so quickly! It has been such a learning experience for me, both in traveling and in fulfilling my role here, as your representative. Please let me know if you have any thoughts or feelings about the Ambassador program, or how it could better serve you. Wishing you all the best!

Sincerely, Lebby





#### SPORTSMAN'S **ASSOCIATION**

Last call to sign up for the Night Fishing Tournament, set for Saturday, July 30, from 7 pm to midnight at Patrick's Fish Camp on East Lake in St. Cloud. The cost is \$5 per person, two per boat. Sign up at Cast Activities before Wed-

nesday, July 27.

The Sportsman's Association campers set the dates for their next campout: July 29 & 30 at Crystal Lake Isles on the Florida West Coast. They plan to do some fishing for scallops, which should be running at that time. The cost will be \$5 per night for two, 50¢ for each additional camper and 50¢ for air conditioning. The Association will get a 10% rebate if 10 or more camp sites are taken.

Crystal Lake Isles has a pool and lake for swimming, boat ramp on the channel leading to Crystal River for some great fishing. As usual, the campers will have a covered dish supper on Saturday evening and hopefully, scallops will be the entree. No cash advance is necessary, but make your reservations at Cast Activities and pick up a brochure with directions.

#### GOING, GOING, GONE!

Tired of high SCUBA equipment prices? Need a special piece of gear? Or, have extra gear you would like to sell? If so, then the Dive Club's SCUBAUC-TION '77 is just for you!

Now is the time to sign up if you are in the market to sell some equipment. Then Tuesday, July 26, at 7:30 pm is the time to show up for those sandy-bottom

Low prices will be the rule of the evening. So plan on being there for some great prices on some great equipment. Special note to all sellers - please be in Cast Activities no later than 7 pm with your equipment.

Last week's meeting and social gathering between the Dive Club and the Orlando Otters was reported as a great success. So much so, in fact, that upcoming dives will be slated for both clubs to attend!

Just e reminder that the Dive Club is planning trips to Bimini and the Florida Keys in August. Eign up information,

dates and fees are available now in Cast Activities Call them at extension 4254 for details!

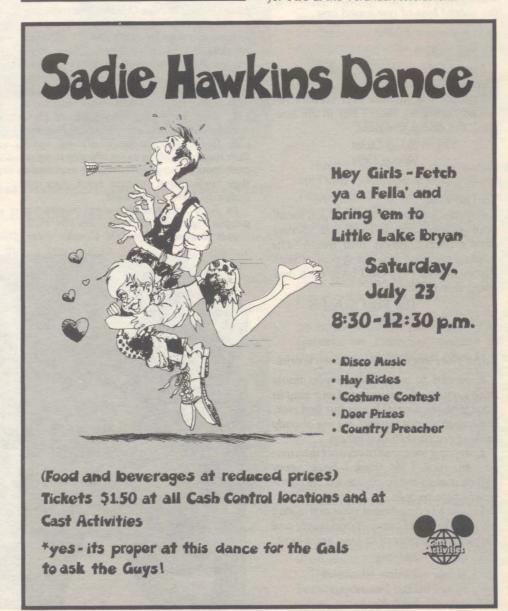
#### FLYING GRASSHOPPERS

The Flying Grasshoppers will have their next meeting on Thursday, July 28, in the Disney University, 1st floor of The Center. All cast members and their families interested in flying or learning how are invited. Aviation films will be shown.

Karl Paul, Haunted Mansion host, became the latest member of the Flying Grasshoppers to earn his Private Pilot Certificate, on July 9. Karl is the third member this year to receive his certificate, with others including Jack Rabon of Reedy Creek Utilities Company and Doug Chandler of Maintenance. Congratulations to these cast members for their achievement!



"T.A. Sonics" will be providing the Disco sounds for this weekend's Sadie Hawkins Dance at the Contemporary Resort. Door prizes on hand will include Dinner for Two at Pioneer Hall, Winnie The Pooh plushes, Strawberry Marquerita's for Two at Captain Jack's, Fondue for Two at the Golf Resort, and an ice cream delight - Captain's Tower for Two at the Verandah Restaurant.



#### SPEAK JAPANESE?

The **Disney University** is presently updating their **Language Skills Bank** to identify our **Japanese** speaking cast members.

If you are fluent in Japanese, please call **Sue** at the Disney University, extension 4744, or come by their offices in The Center before Tuesday, July 26.



# MURPH'S SPORTS LINE Bu: Thom Murphy, EYES & EARS Area Reporter

In last week's Basketball action, Contemporary Housekeeping kept their record unblemished with an 82-54 romp over the Custodial Rangers, and the Hustlers did likewise by breaking away late in the contest to defeat the Liberty Square team by an 80-56 final. Elsewhere, the Super Subs defeated the Custodial Stars in a forfeited contest, Central Foods gorged on Town Square 116-28, and in the two best contests of the evening, Bordens just got by Fantasyland Operations 65-64 and Employee Transportation got by the World Showcase team at the buzzer by another onepointer, 66-65. The games are at the Pine Hills Boy's Club gym every Monday night. Plenty of seating is always availa-

In Wednesday Night double "AA" Softball play, the Contemporary team just got by the perennial contending Custodial gang by a 9-8 final, Employee Relations broke loose for a 12-6 victory over the Fort Wilderness Scavengers, and Bordens and LBV Communities got together in a wild affair, with Bordens finally out scoring the Village gang 21-15. Final action saw a tough Theme Park Maintenance team maintain a lot of momentum with a 12-4 whipping of last Spring's champs . . . the Superballers.

Slow-pitch fans should like the action in this well-balanced league any Wednesday evening, with games at 8 pm and 9:15 pm on both Admin. Area fields. And if you can't make it Wednesday, show up any Thursday for games in the "A" League where the action is just as hotly contested. Last week, Pinocchios more than "nosed out" Transportation 27-13, Salmonella bounced by the Reapers 18-12, and the Fubars shattered Crystal Palace 20-13.



Cast Activities has a **limited number** of tickets left for the remaining showings of *The Rescuers*. Show times left include: Saturday, July 23-3 pm, Continental Room Sunday, July 24-3 pm, Continental Room Monday, July 25-6 & 8:30 pm, Continental Room Tuesday, July 26-6 & 8:30 pm, Continental Room

The Continental Room is located on the 2nd floor of the Contemporary Resort

In order to attend one of the showings, stop by Cast Activities in The Center and pick up your **free tickets** for you and your immediate family.

Please keep in mind that every showing is expected to be a "sell out" performance during our cast premiere of *The Rescuers*, so you **must** have tickets in order to attend. And don't forget to show your **Disney ID** at the door.

# CAST ACTIVITIES TICKET CENTER

Cast Activities currently has tickets available for the following Central Florida events:

- Super Tramp Saturday, July 30 Curtis/Hixson Hall, Tampa, 8 pm, \$5.85
  Helen Reddy Concert Friday, August 5 Sea World's Atlantis Theater, 5:30 pm & 9 pm, all seats reserved, \$7 Helen Reddy Concert only, \$9.25 Concert & Child Admission to Sea World, \$11.25 Concert & Adult Admission to
- Johnny Winter Friday, August 12, Bayfront Center, St. Pete, 8 pm, \$4
- Beginning Monday Cast Activities will have WOMETCO tickets for \$2 each (\$3 value) good for Park East and Park West theaters



1971 AMX. V-8, Auto, Air, Good Condition, Call Terry 293-4343.

**1969 Ford Van.** New paint, custom interior and gauges. A-1 condition. Call 846-0244 after 5 pm.

1970 Ford Maverick. Little rust, good transportation, runs great! \$550. Call Todd at 275-8301.

**1975 Yamaha RD 350.** Less than 3,000 miles \$600. Call 857-3242.

**1967 Suzuki 250-T10.** 11,000 actual miles and accessories. \$250. Concert snare drum and accessories. \$130. Call 847-9282 after 3:30 pm.

**1973 Olds, Custom Cruiser.** Loaded. \$1,500. Call 293-4017 after 6 pm.

1976 Toyota Celica GT Liftback. Copper brown, black loovers, tan interior. 5 speed, 10,600 miles, GOING INTO SERVICE - MUST SELL. \$4,800. Call Richard at 422-4796 after 4:30 pm.

1973 Honda 350. 4 cyl., new tires, mufflers & major tune-up, electric start. Very good condition, \$650. 277-6610.

1974 Fiat X19. Convertible, AM-FM Radio, tires excellent. \$2,700. Phone 299-3687.

1974 Volvo 142. Automatic, power steering, Air, AM-FM. Call 847-2666 Kissimmee.

1968 GTO. MUST SELL - 400 engine with full Cam - New brakes, shocks, exhaust, rear end & transmission. Call 847-8373.

1970 Pontiac Catalina. Very clean, Air, PS & PB, 4-door. PH 904-357-2108.

1973 Dodge Van Camper. Low mileage, AM-FM Stereo, CB, Air, Stove, refr., self-contained, sleeps 4, excellent condition. Call 422-4796. \$6,200.

PAY AND RIDE CARPOOL. Dodge Van. From Eastside of Orlando to North Service parking. 7 to 3:30 shift. Several spaces available, interested, call 277-7728. \$1.50 per day or \$7.00 week. No smoking. No foul language.

Sears Portable Dishwasher. Six months old, avocado green, \$200. 298-6042.

Penney's Lawn Mower. Self-propelled 22 inch, 1 year old. \$80. 298-6042.

WANTED: Someone who is seriously interested in sharing a carpool in the Pine Hills area. Work Monday through Friday, 8:30 am to 5:30 pm. Could probably switch the 5:30 to 5:00 if had to. Call 298-4867 after 6 pm if interested

6-Drawer Chest of Drawers. \$15. Also 1-tire planter \$8, 846-8611.

18' Sail Boat "sol cat". Complete with trailor, flow through trampoline, single trapeze with hamess. Good condition - MUST SELL \$1,600. Call Frank 898-1381 9 am to 5 pm or 859-8693 7 pm to 9 pm.

7 HP Craftsman Riding Mower. with rear bag grass catcher. Like new. Call 671-2508.

**Saw Sharpening Equipment.** Automatic, carbide blade sharpener, mch. circle auto sharpener. Pick up truck VAN also many blades. \$10,000. Call 847-2866 or 846-2571 for more information.

**BOWLERS:** Orange Bowl Lanes has opening for full league (summer & fall) Tues. available for 12 teams at 6:30 pm, 12 teams at 9:00 pm. Come in - get acquainted. Call 847-2866 for information.

# eyes and tars of Watt isney World.

A newspaper for employees of Walt Disney World and related companies. All rights reserved. Reprint of material only upon written approval of the Disney University at Walt Disney World. Address correspondences to:

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**EYES & EARS** 

Walt Disney World

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